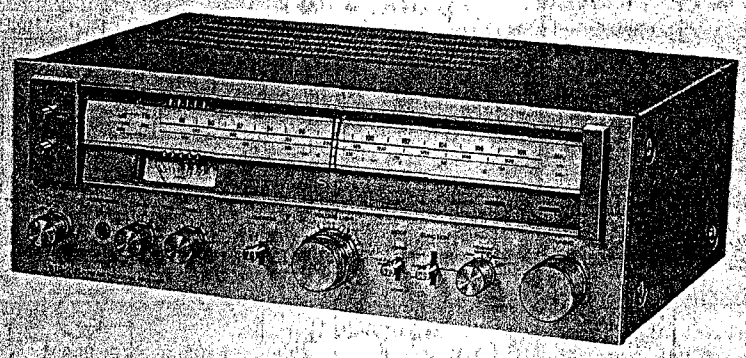
SONY-WEGA-Service
Ersatzteilabteilung
Hugo-Eckener-Straße 20
5000 Köln 30

# STR-212L

AEP Model
UK Model



## FM-AM PROGRAM RECEIVER

### SPECIFICATIONS

**GENERAL**

**Power Requirements:** 240 V ac, 50 Hz (UK model)
120 V, 220 V or 240 V ac adjustable, 50 Hz (AEP model)

**Power Consumption:** 110 W (UK model)
95 W (AEP model)

**Dimensions:** Approx. 410 (w) x 145 (h) x 295 (d) mm
16 (w) x 5 ¾ (h) x 11 ½ (d) inches
including projecting parts and controls.

**Weight:** Approx. 6.3 kg, 13 lb 15 oz (net)
Approx. 7.5 kg, 16 lb 9 oz (in shipping carton)

**FM SECTION**

**Tuning Range:** 87.5 – 108 MHz

**Antenna:** 300 Ω balanced
75 Ω unbalanced

**Intermediate Frequency:** 10.7 MHz

**Sensitivity at 50 dB Quieting:** 4 μV (12 dB) (MONO)
45 μV (33 dB) (STEREO)

**Sensitivity at 46 dB Quieting:** (at 40 kHz deviation) 4.5 μV (13 dB) (MONO)
50 μV (34 dB) (STEREO)

**Usable Sensitivity:** 1.9 μV (5.5 dB), IHF
1.7 μV (4.5 dB), S/N=26 dB
(40 kHz deviation)

**S/N Ratio:** 73 dB (MONO)
68 dB (STEREO)

**Harmonic Distortion:** At 1 kHz
0.3 % (MONO)
0.5 % (STEREO)
At 1 kHz
0.2 % (MONO)
0.3 % (STEREO)

**IM Distortion:** 0.3 % (MONO)
0.5 % (STEREO)

**Separation:** 45 dB at 1 kHz

**Frequency Response:** 40 – 12,500 Hz $^{+0.5}_{-1.0}$ dB
30 – 15,000 Hz $^{+0.5}_{-2.0}$ dB

– Continued on page 2 –

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SONY®
SERVICE MANUAL

Original

**Selectivity:** 55 dB (400 kHz)
30 dB (300 kHz, S/N=26 dB, 40 kHz deviation)
**Capture Ratio:** 1.0 dB
**AM Suppression Ratio:** 54 dB
**Image Response Ratio:** 45 dB
**IF Response Ratio:** 90 dB
**Spurious Response Ratio:** 75 dB
**RF Intermodulation:** 60 dB
**Muting Threshold:** Approx. 5 μV

## MW/LW SECTION

**Tuning Range:** MW: 530 – 1,605 kHz
LW: 150 – 350 kHz
**Antenna:** MW: External antenna terminal
Attached antenna wire
LW: Built-in Ferrite-rod antenna
External antenna terminal
**Intermediate Frequency:** 468 kHz
**Usable Sensitivity:** MW: 100 μV (40 dB)
external antenna (1,000 kHz)
LW: 500 μV/m (53.8 dB/m),
built-in antenna (230 kHz)
100 μV (40 dB),
external antenna (230 kHz)
**S/N Ratio:** MW: 50 dB at 5 mV
LW: 52 dB at 50 mV/m
**Harmonic Distortion:** MW: 0.3 % at 5 mV, 400 Hz
LW: 0.3 % at 50 mV/m, 400 Hz
**Selectivity:** 28 dB (9 kHz)
30 dB (10 kHz)

## AUDIO AMPLIFIER SECTION

**Continuous RMS Power Output:** Less than 0.7 % THD, both channels driven simultaneously
At 40 – 20,000 Hz
15 W + 15 W (8 Ω)
At 1 kHz
15 W + 15 W (8 Ω)
According to DIN 45500
15 W + 15 W (8 Ω)

**Dynamic Power Output:** IHF constant power supply method
50 W at 8 Ω
**Power Bandwidth:** 10 – 40,000 Hz, IHF
**Damping Factor:** 20 at 1 kHz (8 Ω)
**Harmonic Distortion:** Less than 0.7 % at rated output
Less than 0.3 % at 1 W output
**IM Distortion:** (60 Hz : 7 kHz = 4 : 1) Less than 0.7 % at rated output
Less than 0.3 % at 1 W output
**Residual Noise:** Less than 0.08 μW at 8 Ω
**Frequency Response:** PHONO:
RIAA equalization curve ±1.0 dB
TAPE:
10 – 50,000 Hz $^{+1\ dB}_{-3\ dB}$

**Inputs:**

| | Sensitivity | Impedance | S/N | Weighting network |
|---|---|---|---|---|
| PHONO | 2.5 mV (–50 dB) | 50 kΩ | 70 dB | A |
| TAPE | 150 mV (–14.5 dB) | 100 kΩ | 90 dB | A |

Measured with rated output power into 8 Ω loads (both channels driven simultaneously) at 1 kHz.

**Outputs:** (with rated input)

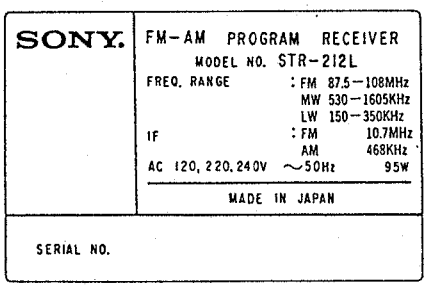
| | Voltage | Impedance |
|---|---|---|
| REC OUT | 150 mV (–14.5 dB) | 10 kΩ |

**Headphones:** Accepts all low or high impedance headphones.
**Speaker:** 8 – 16 Ω speakers are suitable.
**Tone Contorls:** BASS: ±8 dB at 100 Hz
TREBLE: ±8 dB at 10 kHz
**Loudness Control:** (att. 30 dB) +8 dB at 100 Hz
+3 dB at 10 kHz

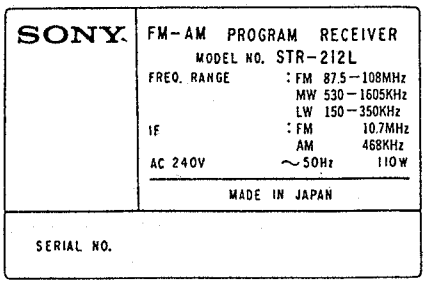
## • MODEL IDENTIFICATION

*– Specification Label –*

**AEP model**

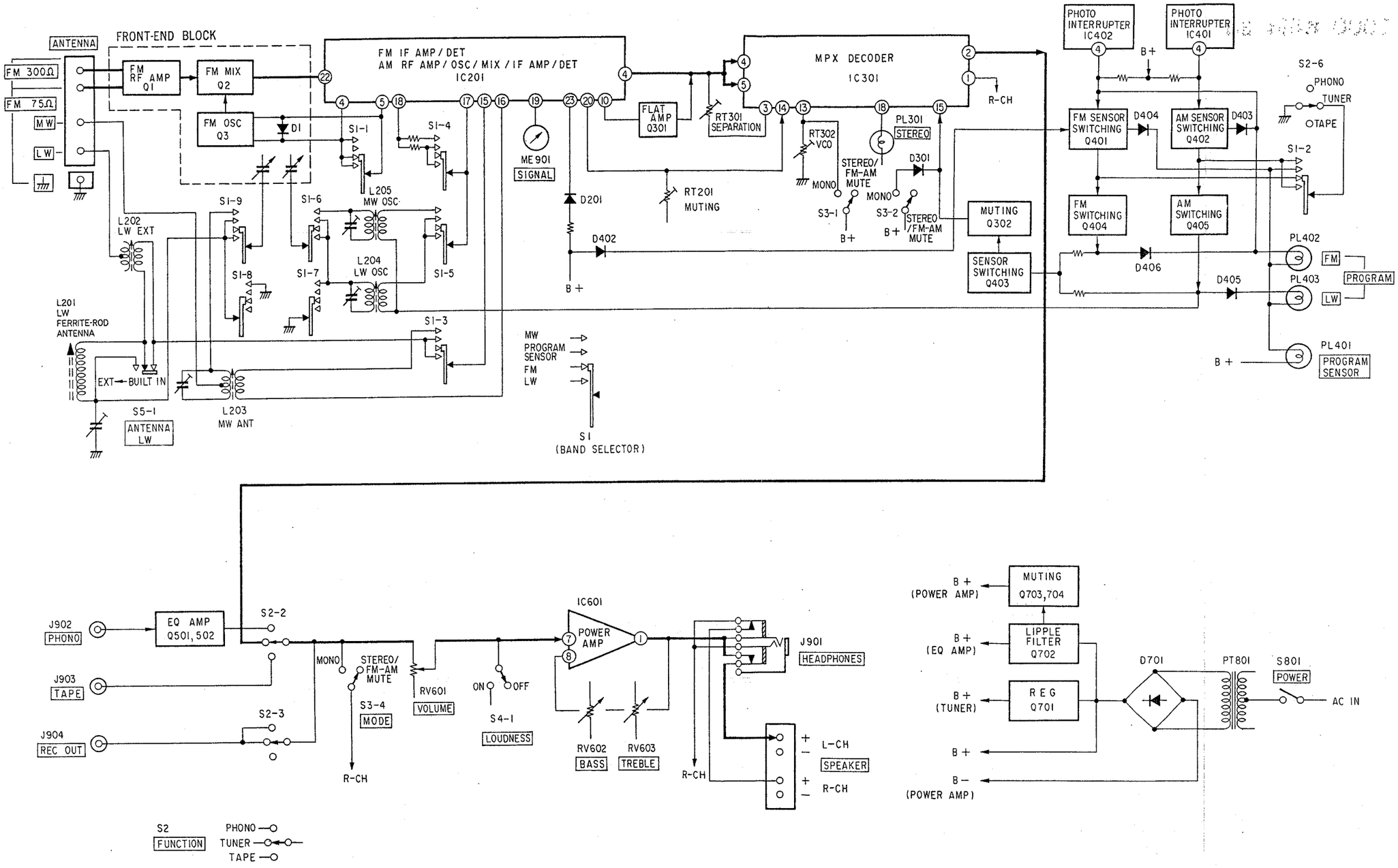



**UK model**



# SECTION 1
# OUTLINE

## 1-1. BLOCK DIAGRAM




—R-CH— (SAME AS L-CH)

## 1-2. CIRCUIT DESCRIPTION (See Fig. 1)

### Program Sensor

The FM or LW band can be changed automatically through the optical detection by the following procedures;

1 Set the FUNCTION selector switch to TUNER position.
2 Then, Set the Program Sensor/Band Selector switch to PROGRAM SENSOR position.
3 Match the dial pointer to the desired Station Marker. (See Fig. 2)
4 The FM or LW band changes automatically.

**1) When the pointer matches only with the FM station marker:**

a) The light of IC402 (Photo Interrupter) is intercepted by the marker, bias voltage is applied to the base of Q401 through R403, and Q401 is turned on.
b) The collecter voltage of Q401 reduces and D402 is turned on.
c) D402 is conducted, B+ voltage through R212 is decreased.
d) D201 is opened, B+ voltage is not supplied to the terminal (23) of IC201.
e) FM circuit operates (The terminal (23) of IC201 serves as a switch).

**Note:** When B+ voltage is applied to the terminal (23) of IC201 through R212, R209 and D201, the receiver is in LW mode.

f) At the same time, PL402 (FM indicator lamp) lights because of Q404 operating.

**2) When the pointer matches only with the LW station marker:**

a) As the light of IC402 is not intercepted, Q401 and D402 are turned off. As a result, B+ voltage is applied to the terminal (23) of IC201 through R212 and R209. On the other hand, the light of IC401 is intercepted by the LW station marker.
b) Q402 and Q405 are turned on.
c) B+ voltage is applied to L204 (LW oscillator coil).
d) LW circuit operates. When Q405 is on, PL403 (LW indicator lamp) simultaneously lights.

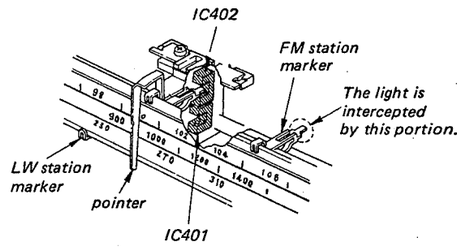



Fig. 2

**3) When the pointer matches simultaneously with both the FM and LW station markers:**

a) Q401 and Q404 are turned on by intercepting the light of IC402. On the other hand, the light of IC401 is also intercepted and the bias voltage is applied to the base of Q402. However, D403 is turned off because the collector potential of Q404 becomes higher than the emitter potential of Q402. Thus, Q402 and Q405 are turned off, and B+ voltage is not applied to L204 (LW oscillator coil). Consequently only the FM station signal is received.

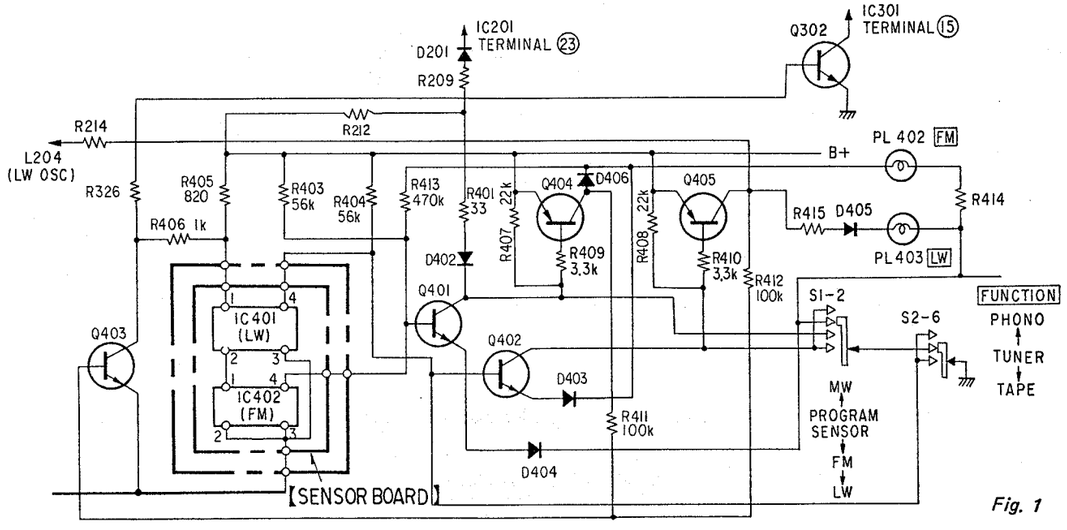



Fig. 1

### Q403 and 302

Q403 operates to improve the rise time of PL402 (FM indicator lamp) or PL403 (LW indicator lamp) when the station signal is tuned, and at the same time switches Q302. Q302 serves as a high-speed-muting switch which is turned on or off as soon as the station signal is tuned or detuned.

### IC201 (CX168), IC301 (CX178)

These two ICs form a system. Both of them are bipolar-linear-ICs. CX168 integrates 343 elements and CX178 integrates 260 elements. They include many functions and are improved upon the degree of integration now available as a linear-ICs for tuner use. They have high performance in FM reception and form a muting system having an FM muting attenuation of 90dB. In addition, because a muting circuit is newly employed in the AM circuit, not only is there high performance in FM reception but AM station signal can be received with fine tone quality and sensitivity as with FM broadcasting station. Besides, as an additional function, they operate for FM/AM continuous station selection, FM/AM signal-strength meter output, FM/AM muting output switching and enforced AGC at FM reception.

### CX168 Main Function

<FM>
- IF Amplifier
- Quadrature detector
- Signal-strength Meter Output
- Muting Signal Output
- AFC Output for Converter
- Multipath Signal Output
- Bandpass Control Circuit

<AM>
- RF Attenuator
- Mixer
- Oscillator
- IF Amplifier and AGC
- AM Detector
- Signal-Strength Meter Output
- Signal Generator for AM Muting

<General>
- Regulator
- FM/AM Switching
- Regulator Output

### CX178 Main Function

<FM Stereo Demodulator>
- FM Stereo Demodulator
- Phase Detector
- Stereo Indicating Circuit
- VCO
- VCO ON/OFF Circuit

<General>
- Muting Gate
- Regulator
- Muting Canceler Circuit
- Pop-noise Canceler
- Hysteresis Circuit

### Photo Interrupter (IC401, 402)

The terminals ① and ② of the photo interrupter operate as the light emitting diode. On the other hand, the terminals ③ and ④ operate as the photo detector. When the photo detector receives the light as shown in Fig. 3, impedance between terminals ③ and ④ is low. When light is intercepted by the marker, as shown in Fig. 4, it becomes high-impedance.

**When the photo detector receives the light** **When light is intercepted**

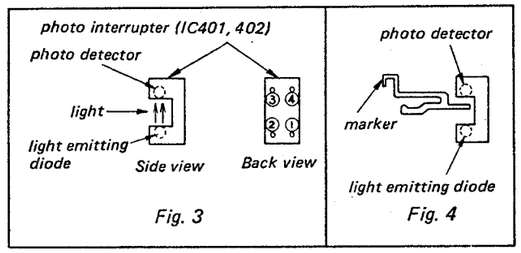



Fig. 3




Fig. 4

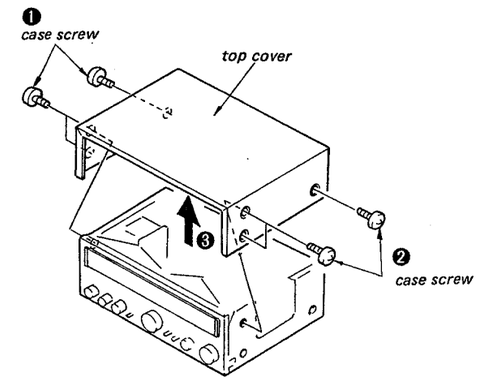




## SECTION 2
## DISASSEMBLY

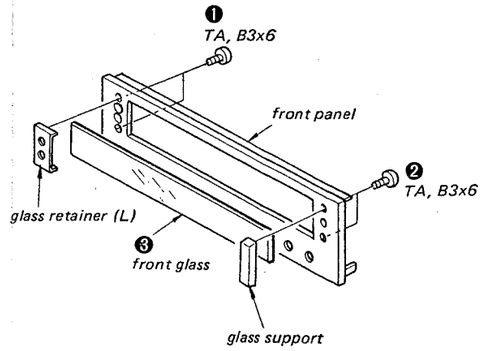
- Follow the disassembly procedure in the numerical order given.

**TOP COVER REMOVAL**

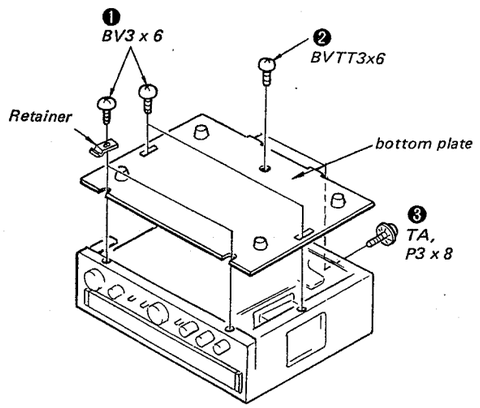



**DIAL CORD STRINGING**
• See page 9.

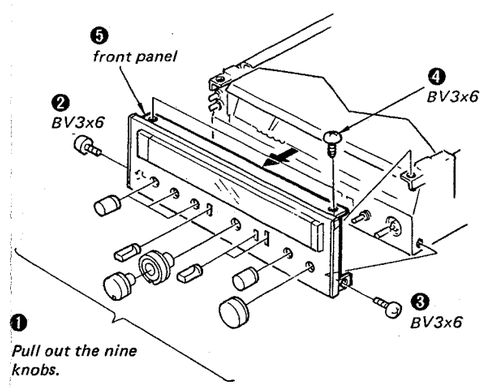
**FRONT GLASS REMOVAL**



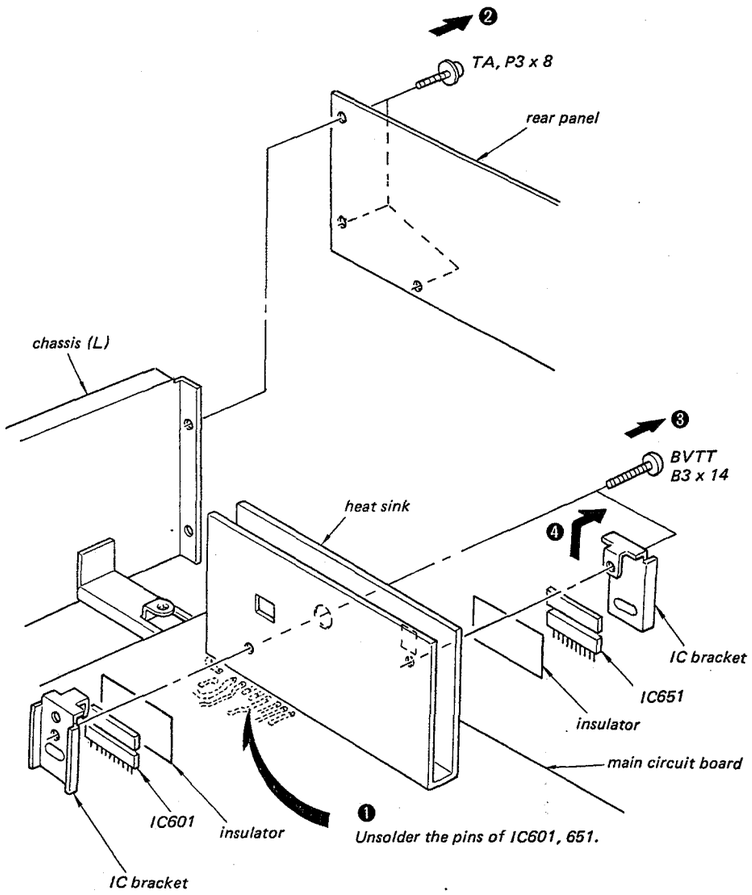

**BOTTOM PLATE REMOVAL**




**FRONT PANEL REMOVAL**



## IC REPLACEMENT

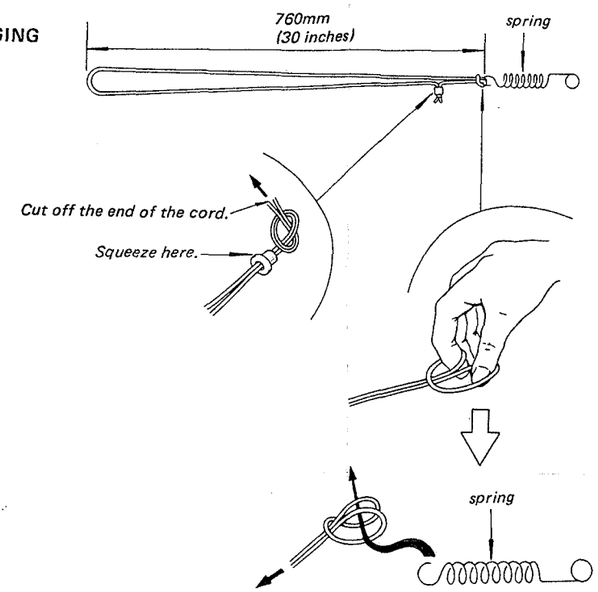






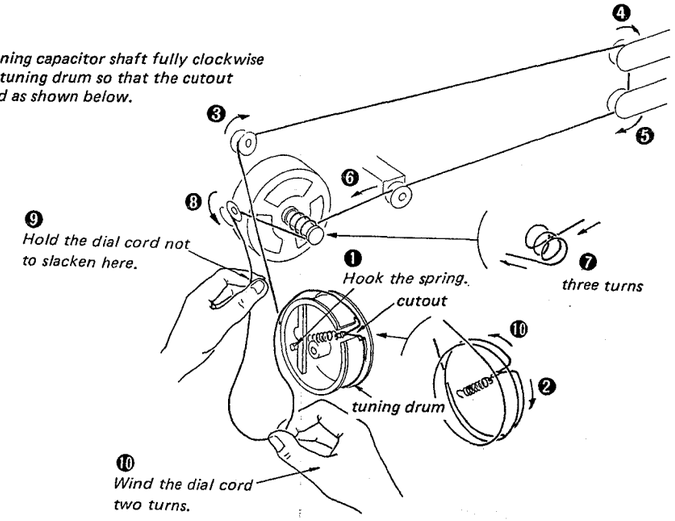

## DIAL CORD STRINGING

### 1) Preparation

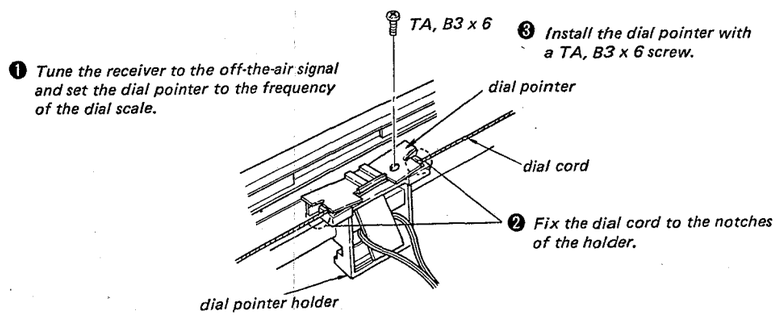



### 2) Stringing

*Turn the tuning capacitor shaft fully clockwise and set the tuning drum so that the cutout is positioned as shown below.*



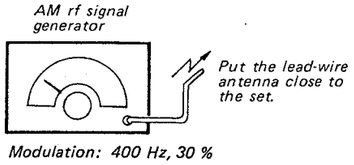

### 3) Dial Pointer Installation

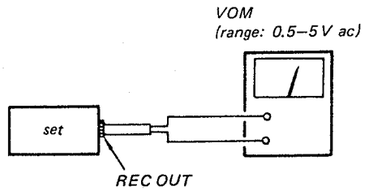

❶ Tune the receiver to the off-the-air signal and set the dial pointer to the frequency of the dial scale.
TA, B3 x 6
❸ Install the dial pointer with a TA, B3 x 6 screw.
dial pointer
dial cord
❷ Fix the dial cord to the notches of the holder.
dial pointer holder

# SECTION 3
# ADJUSTMENTS

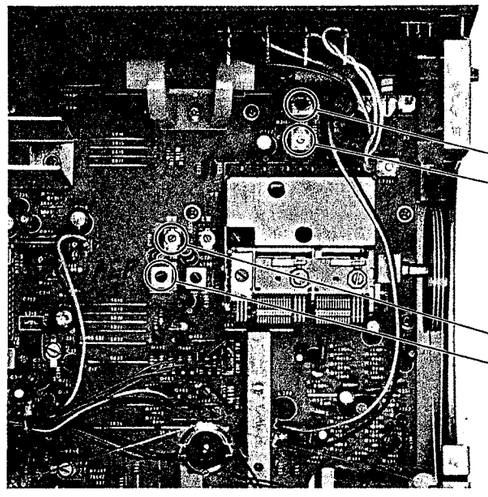
## 3-1. MW SECTION

**Setting:** FUNCTION Selector: TUNER
Band Selector: MW
MODE Selector: STEREO/FM-AM MUTE




- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.



| MW FREQUENCY COVERAGE ADJUSTMENT | |
|---|---|
| Adjust for a maximum reading on VOM. | |
| *L203* | *600 kHz* |
| *CT203* | *1400 kHz* |

| MW TRACKING ADJUSTMENT | |
|---|---|
| Adjust for a maximum reading on VOM. | |
| *CT201* | *1680 kHz* |
| *L205* | *520 kHz* |

### AM IF ALIGNMENT

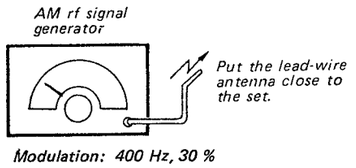
CFT201 has been carefully adjusted at the factory, so the adjustment is unnecessary in the field.

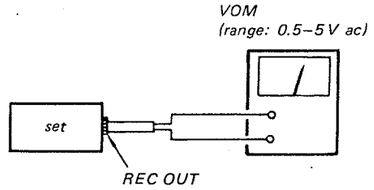




## 3-2. LW SECTION

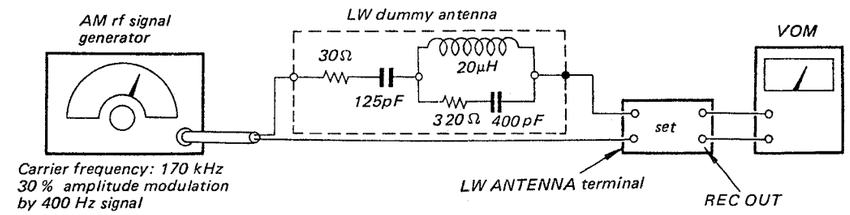
**Setting:** FUNCTION Selector: TUNER
Band Selector: LW
MODE Selector: STEREO/FM-AM MUTE
LW ANTENNA Selector: BUILT IN



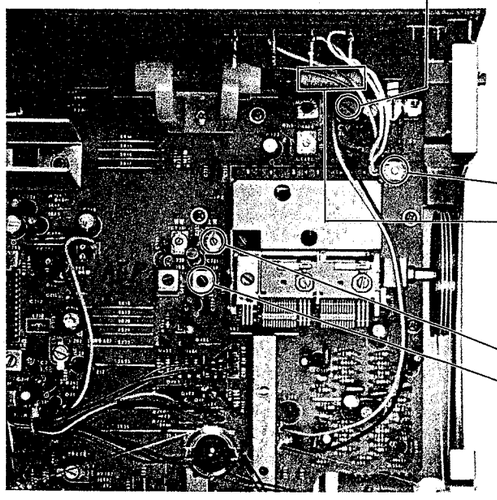




- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

### LW EXT ANTENNA COIL ADJUSTMENT




1. Set the ANTENNA LW switch to EXT position.
2. Tune the set to 170 kHz and adjust L202 for a maximum reading on VOM.

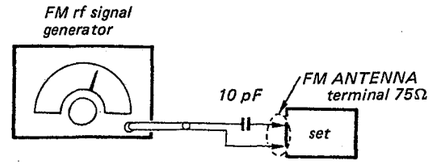


| LW TRACKING ADJUSTMENT | |
|---|---|
| Adjust for a maximum reading on VOM. | |
| *CT204* | *310 kHz* |
| *L201* | *170 kHz* |

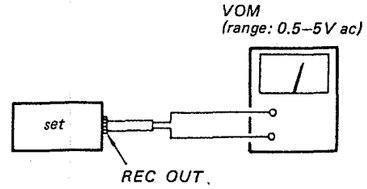
| LW FREQUENCY COVERAGE ADJUSTMENT | |
|---|---|
| Adjust for a maximum reading on VOM. | |
| *CT202* | *365 kHz* |
| *L204* | *145 kHz* |

## 3-3. FM SECTION

**Setting:** FUNCTION Selector: TUNER
Band Selector: FM
MODE Selector: STEREO/FM-AM MUTE



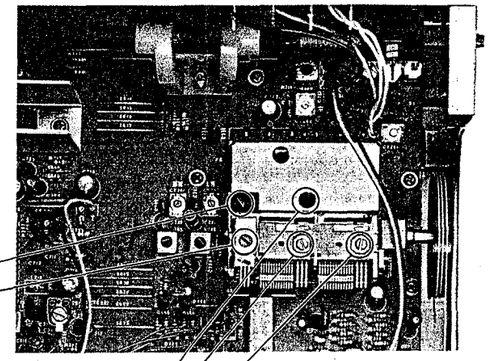

*Modulation: 400 Hz, 75 kHz deviation (100 %)*




- Repeat the procedures in each adjustment several times, and the frequency coverage and tracking adjustments should be finally done by the trimmer capacitors.

| FM FREQUENCY COVERAGE ADJUSTMENT | |
|---|---|
| Adjust for a maximum reading on VOM. | |
| *87.1MHz (87.5MHz)* | *L3* |
| *108.5MHz (108MHz)* | *TC3* |

*( ): in West Germany*

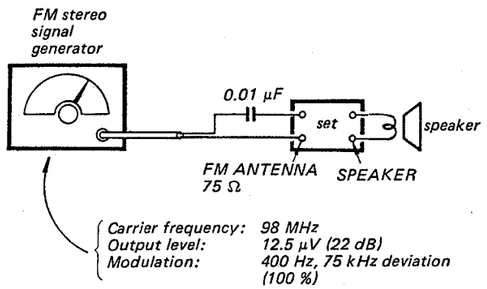


| | |
|---|---|
| *87.1MHz (87.5MHz)* | *L2* |
| *108.5MHz (108MHz)* | *TC2* |
| | *TC1* |
| Adjust for a maximum reading on VOM. | |
| **FM TRACKING ADJUSTMENT** | |

*( ): in West Germany*

## MUTING LEVEL ADJUSTMENT

Setting: FUNCTION Selector: TUNER
Band Selector: FM
MODE Selector: STEREO/FM-AM MUTE

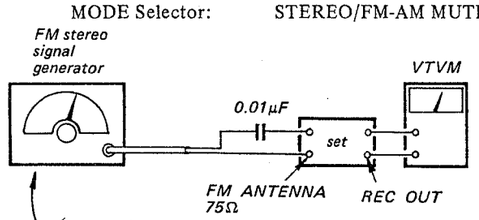



**Procedure:**

Adjust RT201 for the point that the sound is just muted.

## FM STEREO SEPARATION ADJUSTMENT

Setting: FUNCTION Selector: TUNER
Band Selector: FM
MODE Selector: STEREO/FM-AM MUTE


FM stereo signal generator
VTVM
0.01µF
set
FM ANTENNA 75Ω
REC OUT
Carrier frequency: 98 MHz
Output level: 1 mV (60 dB)
Modulation:
Audio (400 Hz): 33.75 kHz deviation (45 %)
Pilot (19 kHz): 7.5 kHz deviation (10 %)
Sub channel (38 kHz): 33.75 kHz deviation (45 %)

**Procedure:**

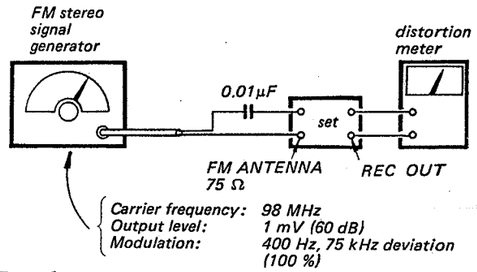
| FM stereo signal generator output channel | VTVM connection | VTVM reading |
|---|---|---|
| L-CH | L-CH | Ⓐ |
| R-CH | L-CH | Ⓑ Adjust RT301 resistor for minimum reading. |
| R-CH | R-CH | Ⓒ |
| L-CH | R-CH | Ⓓ Adjust RT301 resistor for minimum reading. |

L-CH Stereo separation: Ⓐ – Ⓑ
R-CH Stereo separation: Ⓒ – Ⓓ

The difference between separations Ⓐ→Ⓑ and Ⓒ→Ⓓ are to be equal.

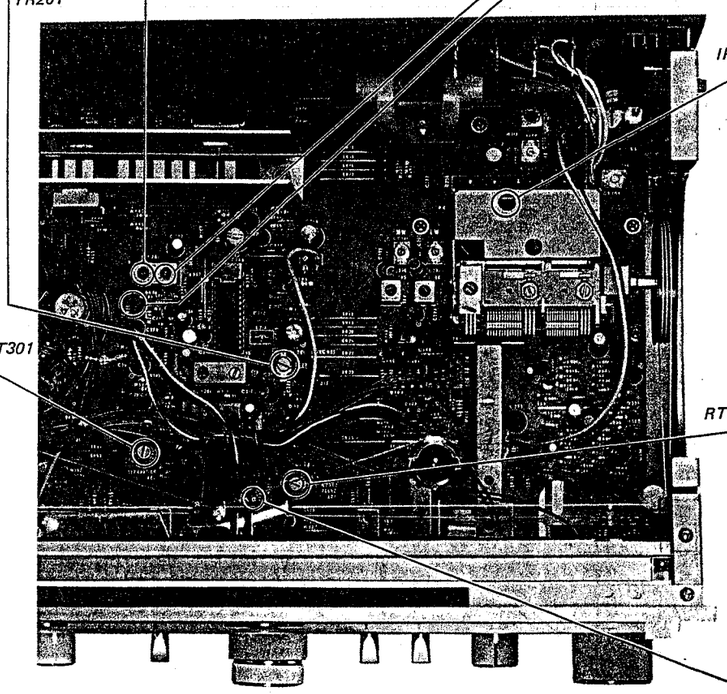
## FM DISCRIMINATOR ALIGNMENT 2

Setting: FUNCTION Selector: TUNER
Band Selector: FM
MODE Selector: MONO

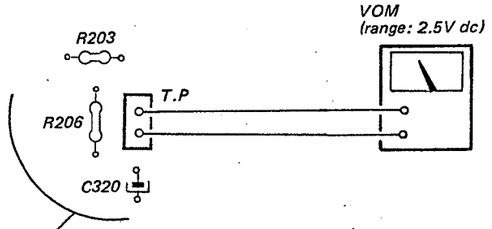



**Procedure:**

Adjust the black core (secondary side) of IFT201 for minimum distortion.




## FM DISCRIMINATOR ALIGNMENT 1



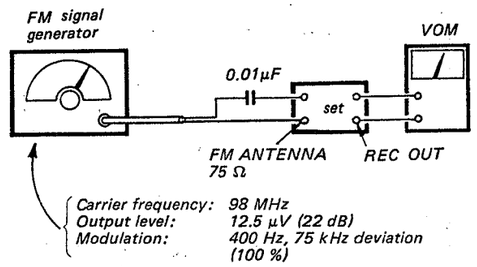

Setting: FUNCTION Selector: TUNER
Band Selector: FM
MODE Selector: MONO
TUNING: Detuned position

**Procedure:**

Adjust the blue core (primary-side) of IFT201 for 0 V reading on VOM.

**Note:** When replacing the ceramic filter (CF201), perform this alignment.

## FM IF ALIGNMENT




Setting: FUNCTION Selector: TUNER
Band Selector: FM
MODE Selector: MONO

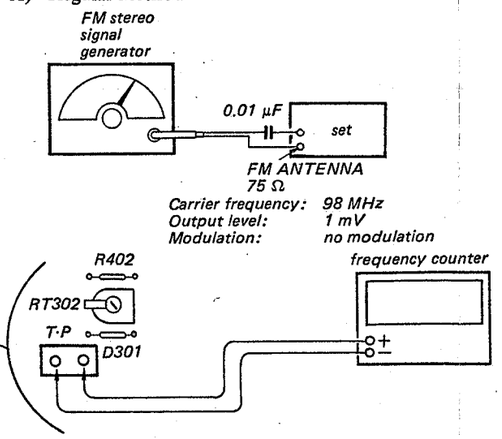
**Procedure:**

Adjust IFT1 for maximum reading on the VOM.

## MPX ADJUSTMENT

Setting: FUNCTION Selector: TUNER
Band Selector: FM
MODE Selector: STEREO/FM-AM MUTE

**A) Regular Method**



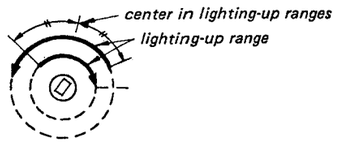

**Procedure:**

Adjust RT302 for 76 kHz ±100 Hz on the frequency counter.

**B) Simple Method**

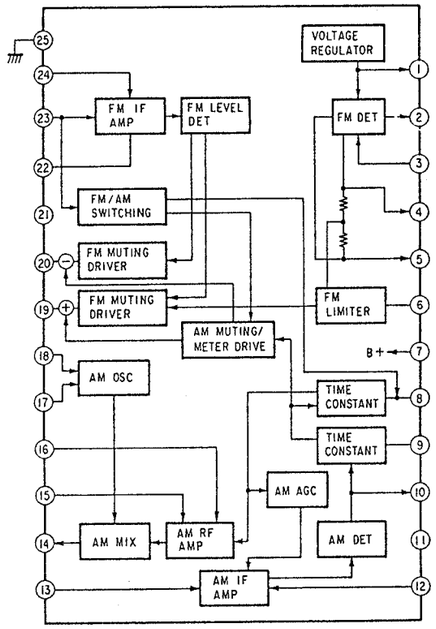
**Procedure:**

1. Turn the set to the FM stereo broadcasting signal.
2. Turn RT302 clockwise or counterclockwise and memorize the lighting-up range of STEREO lamp.
3. Secure RT302 at the center in lighting-up range of both turns as shown below.

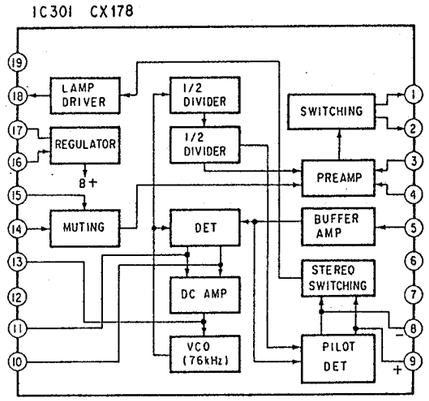


- IC Block Diagram

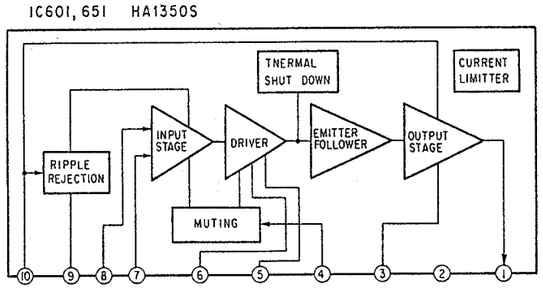
IC201 CX168




IC301 CX178




IC601, 651 HA1350S






9-958-552-91

# FM-AM PROGRAM RECEIVER

# STR-212L

*AEP Model*
*UK Model*

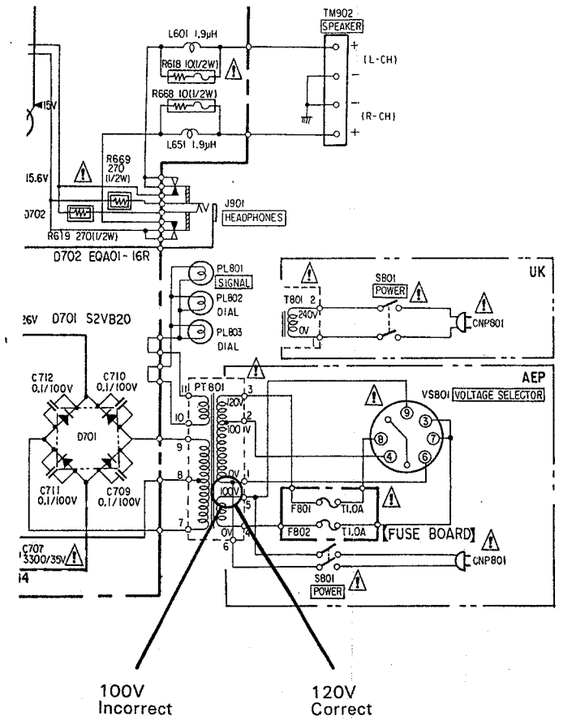
# CORRECTION

File this Correction with the Service Manual.

No. 1
Sept., 1978

**Page 20**

**4-2. SCHEMATIC DIAGRAM**

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SERVICE MANUAL

Sony Corporation
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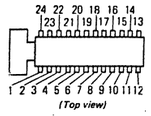
# SECTION 4
# DIAGRAMS

## 4-1. MOUNTING DIAGRAM
*— Conductor Side —*

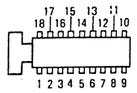
- IC Block diagram: See page 15.
- **Replacement Semiconductors**

For replacement, use semiconductors except in ( ).

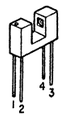
**IC201: CX168**




**IC301: CX178**

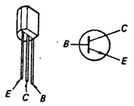



**IC401, 402: SPI-201**

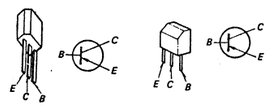



**IC601, 651: HA1350S**

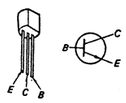
**Q301, 302**
**Q401–403** : 2SC1364
**Q702, 703** (2SC945)



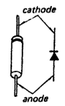

**Q404, 405**
**Q704** : 2SA678 (2SA844)



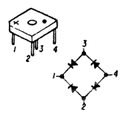

**Q501, 502**
**Q551, 552** : 2SC1345



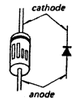

**D201**
**D301, 302**
**D401–406** : 1S1555
**D704**



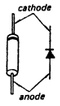

**D701: S2VB20**




**D702: EQB01-16 (EQA01-16R)**

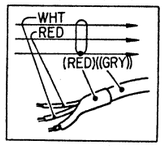



**D703: 10E2**




**Note:**

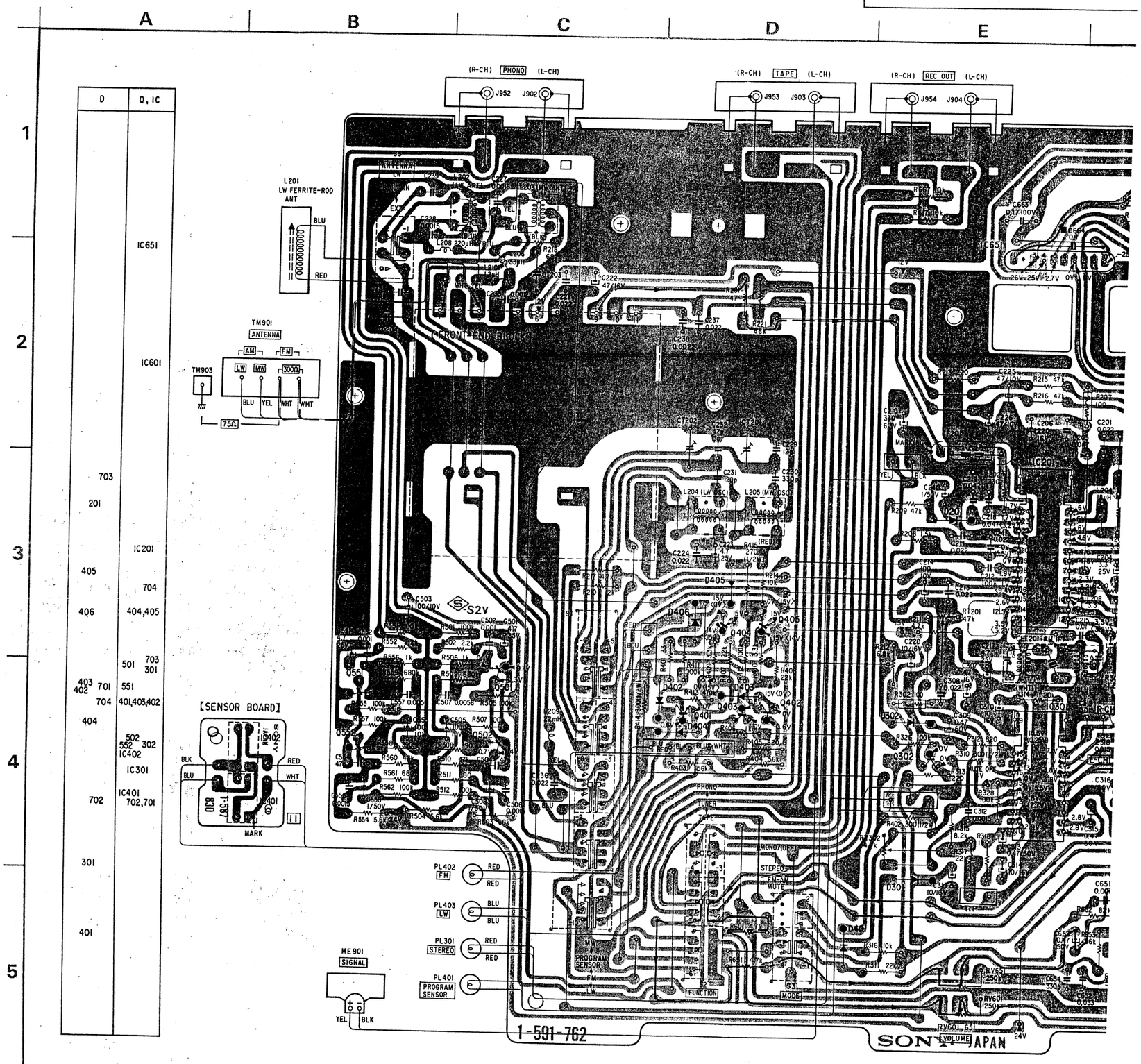
- [□← : indicates side identified with part number.
- Color code of sleeving over the end of the jacket.



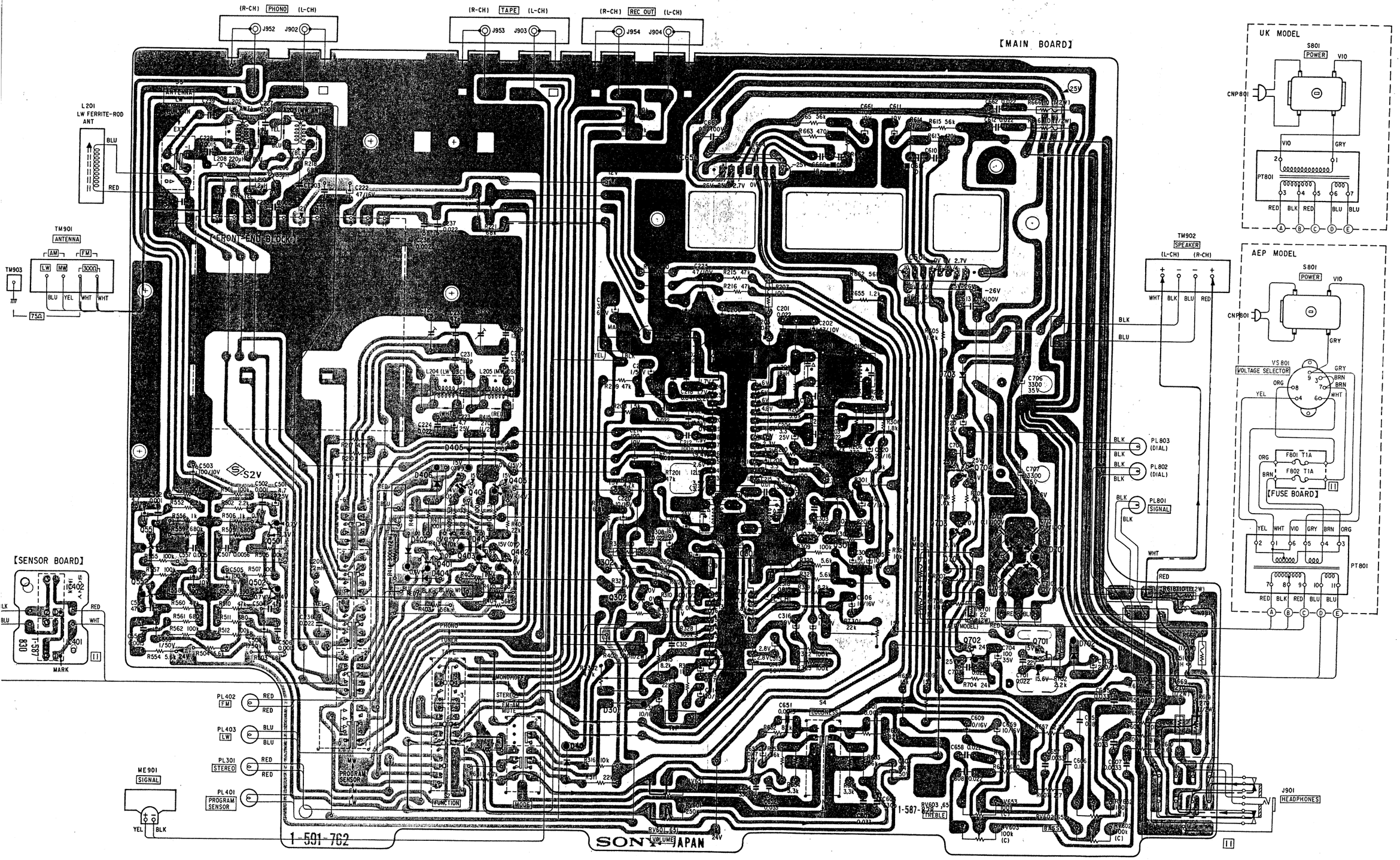

- ■ : part mounted on the conductor side.
- ▬ : B+ pattern.
- ▬ : B– pattern.
- Signal Path
  —— → : L-CH
  —— → : R-CH
- Readings are taken under no-signal (detuned) conditions with a VOM (20kΩ/V).
  < > : AM
  ( ) : STEREO



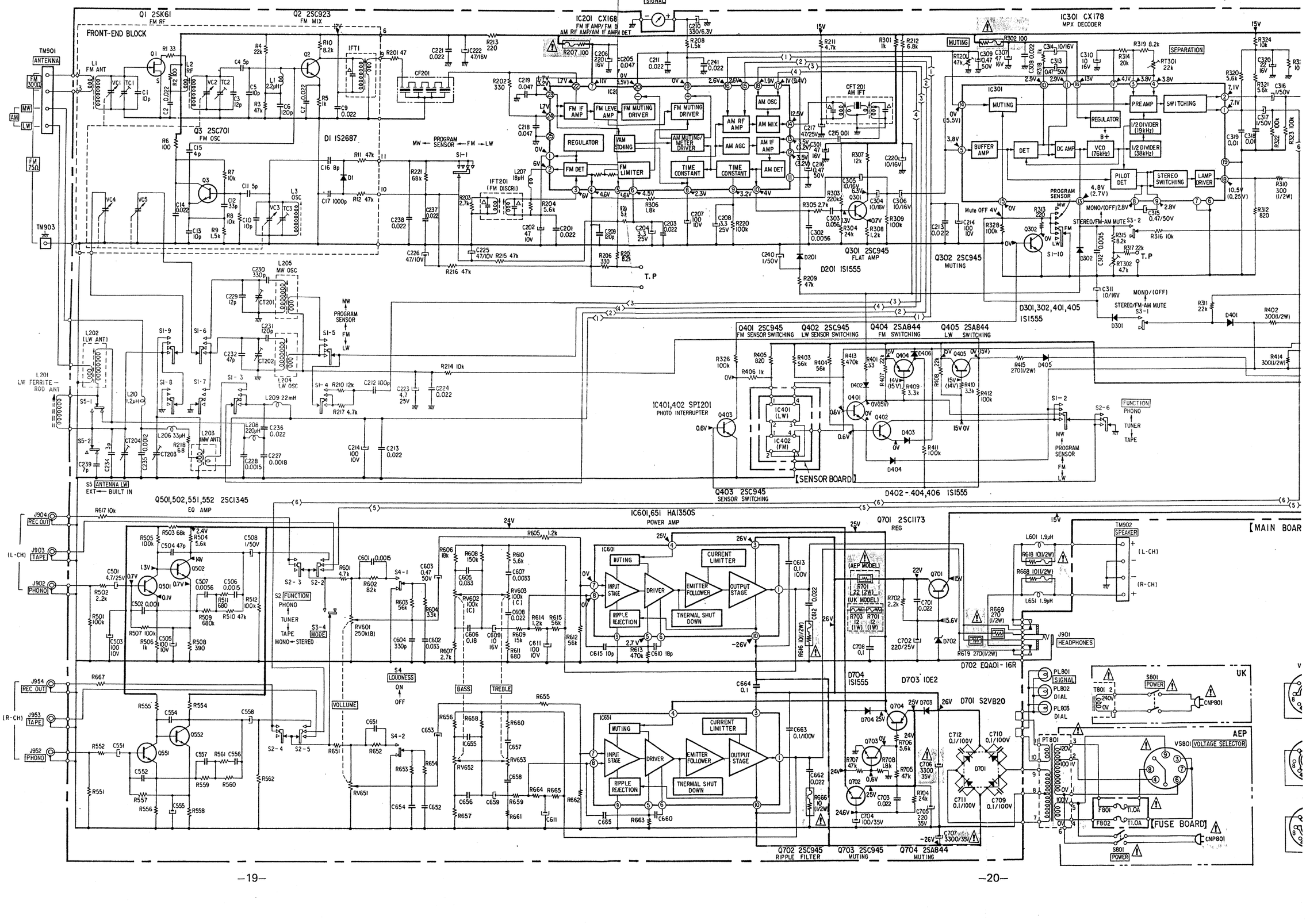


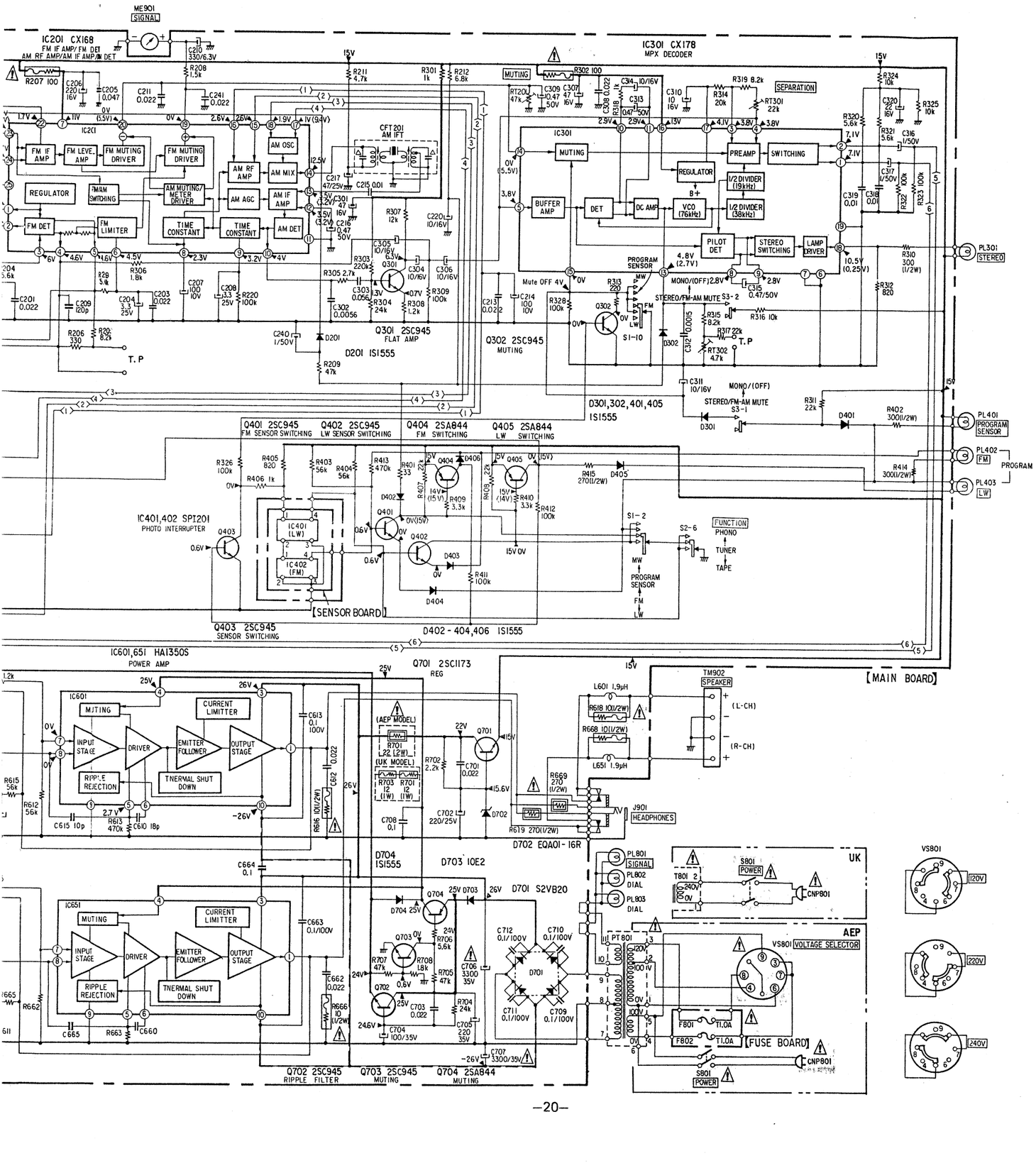


B C D E F G H


(R-CH) PHONO (L-CH)
J952 J902
(R-CH) TAPE (L-CH)
J953 J903
(R-CH) REC OUT (L-CH)
J954 J904
[MAIN BOARD]
L201
LW FERRITE-ROD ANT
BLU
RED
TM901
ANTENNA
AM
FM
LW
MW
300Ω
BLU YEL WHT WHT
TM903
75Ω
(FRONT-END BLOCK)
[SENSOR BOARD]
IC402
PL402
FM
RED
RED
PL403
LW
BLU
BLU
PL301
STEREO
RED
RED
PL401
PROGRAM SENSOR
ME901
SIGNAL
YEL
BLK
PHONO
TUNER
TAPE
MONO/(ST)
STEREO/FM-AM MUTE
FUNCTION
MODE
PROGRAM SENSOR
VOLUME
LOUDNESS
TREBLE
BASS
1-587-762
1-501-762
SONY JAPAN
TM902
SPEAKER
(L-CH) (R-CH)
WHT BLK BLU RED
BLK
BLU
PL803
(DIAL)
PL802
(DIAL)
PL801
SIGNAL
UK MODEL
S801
POWER
VIO
CNP801
VIO
GRY
PT801
RED BLK RED BLU BLU
AEP MODEL
S801
POWER
VIO
CNP801
GRY
VS801
VOLTAGE SELECTOR
GRY
BRN
BRN
ORG
WHT
YEL
ORG
F801 T1A
BRN
F802 T1A
[FUSE BOARD]
YEL WHT VIO GRY BRN ORG
PT801
RED BLK RED BLU BLU
J901
HEADPHONES

## 4-2. SCHEMATIC DIAGRAM



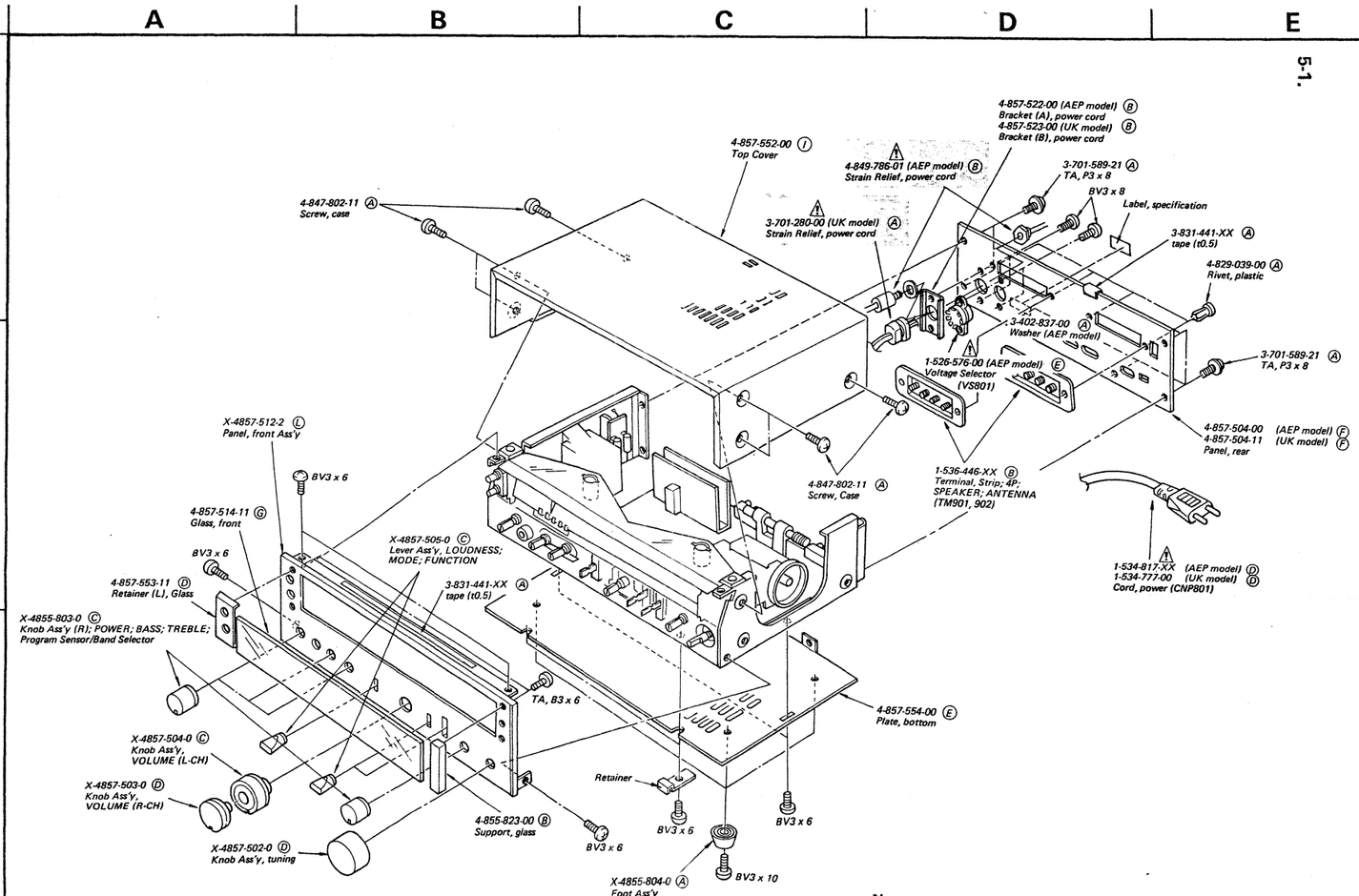



**Note:**

- All capacitors are in μF unless otherwise noted. pF : μμF 50WV or less are not indicated except for electrolytics.
- All resistors are in ohms, ¼W unless otherwise noted. kΩ : 1000Ω, MΩ : 1000kΩ
- ⚠ : fusible resistor.
- ⚠ : nonflammable resistor.
- ▭ : panel designation.
- ——: B+ bus.
- ▭ : adjustment for repair.
- – – –: B– bus.
- Readings are taken under no-signal (detuned) conditions with a VOM (20kΩ/V).
  < >: AM
  ( ) : STEREO
- Voltage variations may be noted due to normal production tolerances.
- Switch

| Ref. No. | Switch | Position |
|---|---|---|
| S1 | Band Selector | FM |
| S2 | FUNCTION | TUNER |
| S3 | MODE | STEREO/FM-AM MUTE |
| S4 | LOUDNESS | OFF |
| S5 | ANTENNA LW | BUILT IN |
| S801 | POWER | OFF |

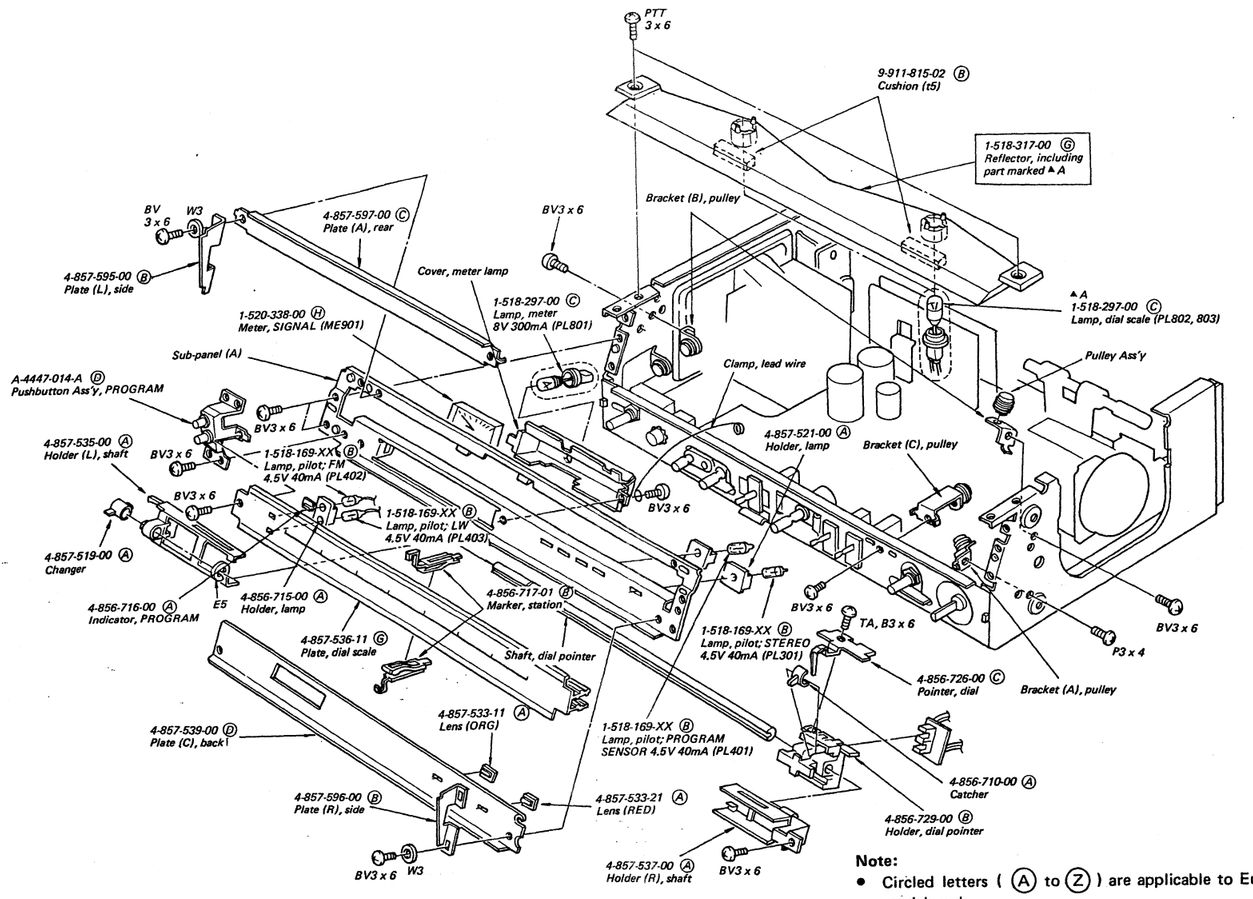
**Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.**


A
B
C
D
E
1
2
3
4
4-857-552-00 (I) Top Cover
4-857-522-00 (AEP model) (B) Bracket (A), power cord
4-857-523-00 (UK model) (B) Bracket (B), power cord
4-849-786-01 (AEP model) (B) Strain Relief, power cord
3-701-589-21 (A) TA, P3 x 8
BV3 x 8
Label, specification
4-847-802-11 (A) Screw, case
3-701-280-00 (UK model) (A) Strain Relief, power cord
3-831-441-XX (A) tape (t0.5)
4-829-039-00 (A) Rivet, plastic
3-402-837-00 (A) Washer (AEP model)
1-526-576-00 (AEP model) (E) Voltage Selector (VS901)
3-701-589-21 (A) TA, P3 x 8
4-857-504-00 (AEP model) (F)
4-857-504-11 (UK model) (F)
Panel, rear
X-4857-512-2 (L) Panel, front Ass'y
BV3 x 6
4-847-802-11 (A) Screw, Case
1-536-446-XX (B) Terminal, Strip; 4P; SPEAKER; ANTENNA (TM901, 902)
4-857-514-11 (G) Glass, front
BV3 x 6
X-4857-505-0 (C) Lever Ass'y, LOUDNESS; MODE; FUNCTION
1-534-817-XX (AEP model) (D)
1-534-777-00 (UK model) (D)
Cord, power (CNP801)
4-857-553-11 (D) Retainer (L), Glass
3-831-441-XX (A) tape (t0.5)
X-4855-803-0 (C) Knob Ass'y (R); POWER; BASS; TREBLE; Program Sensor/Band Selector
TA, B3 x 6
4-857-554-00 (E) Plate, bottom
X-4857-504-0 (C) Knob Ass'y, VOLUME (L-CH)
X-4857-503-0 (D) Knob Ass'y, VOLUME (R-CH)
Retainer
4-855-823-00 (B) Support, glass
BV3 x 6
BV3 x 6
BV3 x 6
X-4857-502-0 (D) Knob Ass'y, tuning
X-4855-804-0 (A) Foot Ass'y
BV3 x 10

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

**Note:**

- Circled letters ( (A) to (Z) ) are applicable to European models only.
- Items with no part number and/or no description are not stocked because they are seldom required for routine service.

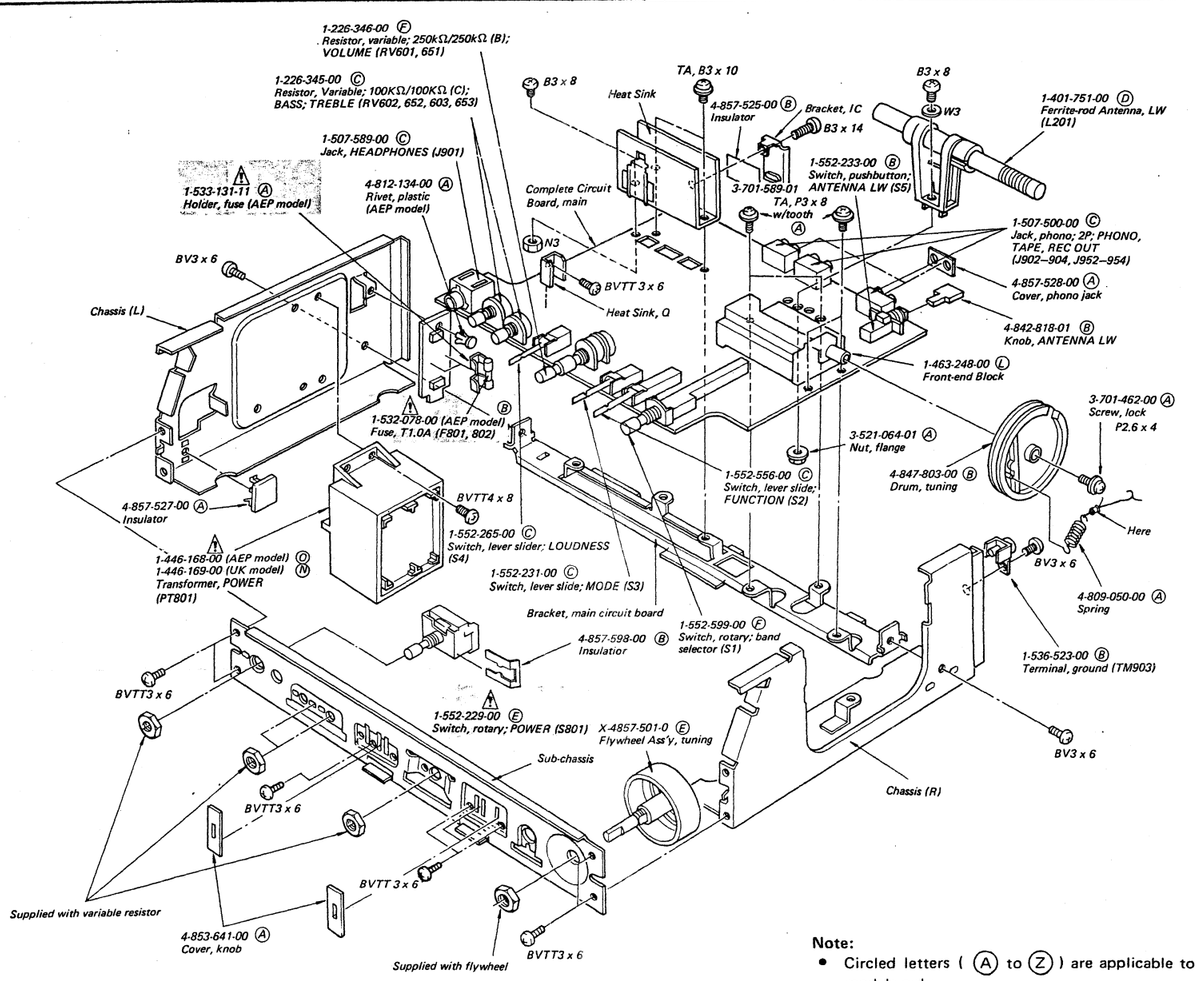

PTT 3 x 6
9-911-815-02 (B) Cushion (t5)
1-518-317-00 (G) Reflector, including part marked ▲A
Bracket (B), pulley
BV 3 x 6
W3
4-857-597-00 (C) Plate (A), rear
BV3 x 6
4-857-595-00 (B) Plate (L), side
Cover, meter lamp
1-518-297-00 (C) Lamp, meter 8V 300mA (PL801)
▲A 1-518-297-00 (C) Lamp, dial scale (PL802, 803)
1-520-338-00 (H) Meter, SIGNAL (ME901)
Sub-panel (A)
Clamp, lead wire
Pulley Ass'y
A-4447-014-A (D) Pushbutton Ass'y, PROGRAM
BV3 x 6
4-857-535-00 (A) Holder (L), shaft
BV3 x 6
1-518-169-XX (B) Lamp, pilot; FM 4.5V 40mA (PL402)
4-857-521-00 (A) Holder, lamp
Bracket (C), pulley
BV3 x 6
1-518-169-XX (B) Lamp, pilot; LW 4.5V 40mA (PL403)
BV3 x 6
4-857-519-00 (A) Changer
4-856-716-00 (A) Indicator, PROGRAM
E5
4-856-715-00 (A) Holder, lamp
4-856-717-01 (B) Marker, station
BV3 x 6
TA, B3 x 6
1-518-169-XX (B) Lamp, pilot; STEREO 4.5V 40mA (PL301)
BV3 x 6
P3 x 4
4-857-536-11 (G) Plate, dial scale
Shaft, dial pointer
4-856-726-00 (C) Pointer, dial
Bracket (A), pulley
4-857-533-11 (A) Lens (ORG)
4-857-539-00 (D) Plate (C), back
1-518-169-XX (B) Lamp, pilot; PROGRAM SENSOR 4.5V 40mA (PL401)
4-856-710-00 (A) Catcher
4-857-596-00 (B) Plate (R), side
4-857-533-21 (A) Lens (RED)
4-856-729-00 (B) Holder, dial pointer
BV3 x 6
W3
4-857-537-00 (A) Holder (R), shaft
BV3 x 6

**Note:**

- Circled letters ( (A) to (Z) ) are applicable to European models only.
- Items with no part number and/or no description are not stocked because they are seldom required for routine service.






1-226-346-00 (F) Resistor, variable; 250kΩ/250kΩ (B); VOLUME (RV601, 651)
1-226-345-00 (C) Resistor, Variable; 100KΩ/100KΩ (C); BASS; TREBLE (RV602, 652, 603, 653)
B3 x 8
Heat Sink
TA, B3 x 10
4-857-525-00 (B) Insulator
Bracket, IC
B3 x 14
B3 x 8
W3
1-401-751-00 (D) Ferrite-rod Antenna, LW (L201)
1-507-589-00 (C) Jack, HEADPHONES (J901)
1-552-233-00 (B) Switch, pushbutton; ANTENNA LW (S5)
3-701-589-01
1-533-131-11 (A) Holder, fuse (AEP model)
4-812-134-00 (A) Rivet, plastic (AEP model)
Complete Circuit Board, main
TA, P3 x 8 w/tooth (A)
1-507-500-00 (C) Jack, phono; 2P; PHONO, TAPE, REC OUT (J902–904, J952–954)
N3
BV3 x 6
BVTT 3 x 6
Heat Sink, Q
4-857-528-00 (A) Cover, phono jack
Chassis (L)
4-842-818-01 (B) Knob, ANTENNA LW
1-463-248-00 (L) Front-end Block
1-532-078-00 (AEP model) (B) Fuse, T1.0A (F801, 802)
3-701-462-00 (A) Screw, lock P2.6 x 4
3-521-064-01 (A) Nut, flange
1-552-556-00 (C) Switch, lever slide; FUNCTION (S2)
4-847-803-00 (B) Drum, tuning
BVTT4 x 8
4-857-527-00 (A) Insulator
1-552-265-00 (C) Switch, lever slider; LOUDNESS (S4)
Here
1-446-168-00 (AEP model) (O)
1-446-169-00 (UK model) (N)
Transformer, POWER (PT801)
1-552-231-00 (C) Switch, lever slide; MODE (S3)
BV3 x 6
4-809-050-00 (A) Spring
Bracket, main circuit board
4-857-598-00 (B) Insulator
1-552-599-00 (F) Switch, rotary; band selector (S1)
1-536-523-00 (B) Terminal, ground (TM903)
BVTT3 x 6
1-552-229-00 (E) Switch, rotary; POWER (S801)
X-4857-501-0 (E) Flywheel Ass'y, tuning
BV3 x 6
Sub-chassis
Chassis (R)
BVTT3 x 6
BVTT 3 x 6
Supplied with variable resistor
4-853-641-00 (A) Cover, knob
Supplied with flywheel
BVTT3 x 6

**Note:**

- Circled letters ( (A) to (Z) ) are applicable to European models only.
- Items with no part number and/or no description are not stocked because they are seldom required for routine service.

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

# SECTION 6
# ELECTRICAL PARTS LIST

• Circled letters ( Ⓐ to Ⓩ ) are applicable to European models only.

| *Ref. No.* | *Part No.* | *Description* |
|---|---|---|
| | | **SEMICONDUCTORS** |
| | | **ICs** |
| IC201 | 8-751-680-01 | Ⓛ CX168 |
| IC301 | 8-751-780-00 | Ⓚ CX178 |
| IC401,402 | 8-719-902-01 | Ⓖ SPI-201 |
| IC601,651 | 8-759-313-50 | Ⓚ HA1350S |
| | | **Transistors** |
| ⇒ Q301, 302<br>⇒ Q401–403<br>⇒ Q702, 703 | 8-729-663-47 | Ⓑ 2SC1364 |
| ⇒ Q404, 405<br>Q704 | 8-727-788-00 | Ⓒ 2SA678 |
| Q501, 502<br>Q551, 552 | 8-729-334-58 | Ⓒ 2SC1345 |
| Q701 | 8-729-217-33 | Ⓔ 2SC1173 |
| | | **Diodes** |
| D201<br>D301, 302<br>D401–406<br>D704 | 8-719-815-55 | Ⓑ 1S1555 |
| D701 | 8-719-502-20 | Ⓕ S2VB20 |
| ⇒ D702 | 8-719-931-16 | Ⓓ EQB01-16 |
| D703 | 8-719-200-02 | Ⓑ 10E2 |
| | | **COILS** |
| L201 | 1-401-751-00 | Ⓓ LW Antenna, ferrite-rod |
| L202 | 1-401-709-00 | Ⓒ LW Antenna |
| L203 | 1-401-728-00 | Ⓑ MW Antenna |
| L204 | 1-405-813-00 | Ⓑ LW Osc |
| L205 | 1-405-797-00 | Ⓑ MW Osc |
| L207 | 1-407-741-00 | Ⓑ 18μH microinductor |
| L209 | 1-407-210-XX | Ⓐ 22mH microinductor |
| | | **TRANSFORMERS AND FILTER** |
| CF201 | 1-527-346-00 | Ⓒ Filter, ceramic |
| CFT201 | 1-404-087-00 | Ⓓ AM IFT |
| IFT201 | 1-404-011-00 | Ⓒ Discri, FM |
| PT801 | ⚠ 1-446-168-00 | Ⓛ Power (AEP model) |
| PT801 | ⚠ 1-446-169-00 | Ⓛ Power (UK model) |

• ⇒: Due to standardization, interchangeable replacements may be substituted for parts specified in the diagrams.

| *Ref. No.* | *Part No.* | *Description* | | |
|---|---|---|---|---|
| | | **CAPACITORS** | | |
| All capacitors are in μF and ceramic unless otherwise noted. 50WV or less are not indicated except for electrolytics. pF : μμF, elect : electrolytic | | | | |
| C201 | 1-101-924-00 | Ⓐ 0.022 | | |
| C202 | 1-121-352-00 | Ⓐ 47 | 10V | elect |
| C203 | 1-101-924-00 | Ⓐ 0.022 | | |
| C204 | 1-121-392-00 | Ⓐ 3.3 | 25V | elect |
| C205 | 1-101-925-00 | Ⓐ 0.047 | | |
| C206 | 1-121-421-00 | Ⓑ 220 | 16V | elect |
| C207 | 1-121-414-00 | Ⓐ 100 | 10V | elect |
| C208 | 1-121-392-00 | Ⓐ 3.3 | 25V | elect |
| C209 | 1-102-816-00 | Ⓐ 120p | | |
| C210 | 1-121-751-00 | Ⓐ 330 | 6.3V | elect |
| C211 | 1-101-924-00 | Ⓐ 0.022 | | |
| C212 | 1-102-973-00 | Ⓐ 100p | | |
| C213 | 1-101-924-00 | Ⓐ 0.022 | | |
| C214 | 1-121-414-00 | Ⓐ 100 | 10V | elect |
| C215 | 1-101-923-00 | Ⓐ 0.01 | | |
| C216 | 1-121-726-00 | Ⓐ 0.47 | 50V | elect |
| C217 | 1-121-395-00 | Ⓐ 4.7 | 25V | elect |
| C218, 219 | 1-101-925-00 | Ⓐ 0.047 | | |
| C220 | 1-121-651-00 | Ⓐ 10 | 16V | elect |
| C221 | 1-101-924-00 | Ⓐ 0.022 | | |
| C222 | 1-121-409-00 | Ⓐ 47 | 16V | elect |
| C223 | 1-121-395-00 | Ⓐ 4.7 | 25V | elect |
| C224 | 1-101-924-00 | Ⓐ 0.022 | | |
| C225, 226 | 1-121-352-00 | Ⓐ 47 | 10V | elect |
| C227 | 1-108-561-00 | Ⓐ 0.0018 | | mylar |
| C228 | 1-108-559-00 | Ⓐ 0.0015 | | mylar |
| C229 | 1-102-262-00 | Ⓐ 12p | | |
| C230 | 1-104-065-00 | Ⓐ 330p | | polystyrol |
| C231 | 1-104-055-00 | Ⓐ 120p | | polystyrol |
| C232 | 1-101-880-00 | Ⓐ 47p | | |
| C234 | 1-102-940-00 | Ⓐ 3p | | |
| C235 | 1-102-118-00 | Ⓐ 0.0012 | | |
| C236–238 | 1-101-924-00 | Ⓐ 0.022 | | |
| C239 | 1-102-944-00 | Ⓐ 7p | | |
| C240 | 1-121-391-00 | Ⓐ 1 | 50V | elect |
| C241 | 1-101-924-00 | Ⓐ 0.022 | | |

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.



• Circled letters ( Ⓐ to Ⓩ ) are applicable to Europen models only.

| *Ref. No.* | *Part No.* | *Description* | | |
|---|---|---|---|---|
| C301 | 1-121-409-00 | Ⓐ 47 | 16V | elect |
| C302 | 1-108-573-00 | Ⓐ 0.0056 | | mylar |
| C303 | 1-108-846-00 | Ⓐ 0.056 | | mylar |
| C304–306 | 1-121-651-00 | Ⓐ 10 | 16V | elect |
| C307 | 1-123-192-00 | Ⓐ 47 | 16V | elect |
| C308 | 1-101-924-00 | Ⓐ 0.022 | | |
| C309 | 1-121-726-00 | Ⓐ 0.47 | 50V | elect |
| C310, 311 | 1-121-651-00 | Ⓐ 10 | 16V | elect |
| C312 | 1-104-081-00 | Ⓐ 0.0015 | | polystyrol |
| C313 | 1-121-726-00 | Ⓐ 0.47 | 50V | elect |
| C314 | 1-121-651-00 | Ⓐ 10 | 16V | elect |
| C315 | 1-121-726-00 | Ⓐ 0.47 | 50V | elect |
| C316, 317 | 1-121-391-00 | Ⓐ 1 | 50V | elect |
| C318, 319 | 1-108-837-00 | Ⓐ 0.01 | | mylar |
| C320 | 1-121-479-00 | Ⓐ 22 | 16V | elect |
| C501, 551 | 1-121-395-00 | Ⓐ 4.7 | 25V | elect |
| C502, 552 | 1-108-227-00 | Ⓐ 0.001 | | mylar |
| C503, 553 | 1-121-414-00 | Ⓐ 100 | 10V | elect |
| C504, 554 | 1-101-880-00 | Ⓐ 47p | | |
| C505, 555 | 1-121-414-00 | Ⓐ 100 | 10V | elect |
| C506, 556 | 1-108-559-00 | Ⓐ 0.0015 | | mylar |
| C507, 557 | 1-108-573-00 | Ⓐ 0.0056 | | mylar |
| C508, 558 | 1-121-391-00 | Ⓐ 1 | 50V | elect |
| C601, 651 | 1-108-559-00 | Ⓐ 0.0015 | | mylar |
| C602, 652 | 1-108-843-00 | Ⓐ 0.033 | | mylar |
| C603, 653 | 1-121-726-00 | Ⓐ 0.47 | 50V | elect |
| C604, 654 | 1-102-820-00 | Ⓐ 330p | | |
| C605, 655 | 1-108-843-00 | Ⓐ 0.033 | | mylar |
| C606, 656 | 1-108-364-00 | Ⓐ 0.18 | | mylar |
| C607, 657 | 1-108-567-00 | Ⓐ 0.0033 | | mylar |
| C608, 658 | 1-108-242-00 | Ⓐ 0.022 | | mylar |
| C609, 659 | 1-121-651-00 | Ⓐ 10 | 16V | elect |
| C610, 660 | 1-102-953-00 | Ⓐ 18p | | |
| C611, 661 | 1-123-196-00 | Ⓐ 100 | 10V | elect |
| C612, 662 | 1-108-242-00 | Ⓐ 0.022 | | mylar |
| C613, 663 | 1-108-389-00 | Ⓑ 0.1 | 100V | mylar |
| C615, 665 | 1-102-947-00 | Ⓐ 10p | | |
| C664 | 1-108-849-11 | Ⓐ 0.1 | | mylar |
| C701 | 1-101-924-00 | Ⓐ 0.022 | | |
| C702 | 1-121-436-00 | Ⓐ 220 | 25V | elect |
| C703 | 1-101-924-00 | Ⓐ 0.022 | | |
| C704 | 1-121-357-00 | Ⓑ 100 | 35V | elect |
| C705 | 1-121-261-00 | Ⓑ 220 | 35V | elect |

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

| *Ref. No.* | *Part No.* | *Description* | | |
|---|---|---|---|---|
| C706, 707 | ⚠ 1-123-118-00 | Ⓔ 3300 | 35V | elect |
| C708 | 1-108-837-00 | Ⓐ 0.01 | | mylar |
| C709–712 | 1-108-389-00 | Ⓑ 0.1 | 100V | mylar |
| CT201–204 | 1-141-171-00 | Ⓑ Trimmer | | |
| | | **RESISTORS** | | |
| All resistors are in ohms. Common ¼W carbon resistors are omitted. Refer to the list on the last page for their part numbers. | | | | |
| R207 | ⚠ 1-217-399-00 | Ⓑ 100 | ¼W | fusible (nonflammable) |
| R302 | ⚠ 1-212-881-00 | Ⓐ 100 | ¼W | fusible (nonflammable) |
| R310 | 1-244-860-00 | Ⓐ 300 | ½W | carbon |
| R402, 414 | 1-244-860-00 | Ⓐ 300 | ½W | carbon |
| R415 | 1-244-859-00 | Ⓐ 270 | ½W | carbon |
| R616, 666 | ⚠ 1-212-958-00 | Ⓐ 10 | ½W | fusible (nonflammable) |
| R619, 669 | ⚠ 1-211-624-00 | Ⓑ 270 | ½W | carbon (nonflammable) |
| R618, 668 | ⚠ 1-212-958-00 | Ⓐ 10 | ½W | fusible (nonflammable) |
| R701 | ⚠ 1-206-471-00 | Ⓐ 22 | 2W | metal oxide (nonflammable) (AEP model) |
| R701 | ⚠ 1-213-060-00 | Ⓐ 10 | 1W | fusible (nonflammable) (UK model) |
| R703 | ⚠ 1-213-062-00 | Ⓑ 22 | 1W | fusible (nonflammable) (UK model) |
| RT201 | 1-224-647-XX | Ⓑ 47k, adjustable; muting | | |
| RT301 | 1-224-646-XX | Ⓑ 22k, adjustable; separation | | |
| RT302 | 1-224-644-XX | Ⓑ 4.7k, adjustable; vco | | |
| RV601,651 | 1-226-346-00 | Ⓔ 250k/250k (B), variable; VOLUME | | |
| RV602,652 | 1-226-345-00 | Ⓒ 100k/100k (C), variable; BASS | | |
| RV603,653 | 1-226-345-00 | Ⓒ 100k/100k (C), variable; TREBLE | | |
| | | **SWITCHES** | | |
| S1 | 1-552-599-00 | Ⓕ Rotary, band selector | | |
| S2 | 1-552-556-00 | Ⓒ Lever Slide, FUNCTION | | |
| S3 | 1-552-231-00 | Ⓒ Lever Slide, MODE | | |
| S4 | 1-552-265-00 | Ⓒ Lever Slide, LOUDNESS | | |
| S5 | 1-552-233-00 | Ⓒ Pushbutton, ANTENNA LW | | |
| S801 | ⚠ 1-552-229-00 | Ⓕ Rotary, POWER | | |

- Circled letters ( Ⓐ to Ⓩ ) are applicable to European models only.

| *Ref. No.* | *Part No.* | | *Description* |
|---|---|---|---|
| | | | **LAMPS** |
| PL301 | 1-518-169-XX | (B) | Pilot, STEREO (4.5V 40mA) |
| PL401 | 1-518-169-XX | (B) | Pilot, PROGRAM SENSOR (4.5V 40mA) |
| PL402 | 1-518-169-XX | (B) | Pilot, FM (4.5V 40mA) |
| PL403 | 1-518-169-XX | (B) | Pilot, LW (4.5V 40mA) |
| PL801 | 1-518-297-00 | (C) | Meter (8.0V 300mA) |
| | 1-518-317-00 | (G) | Reflector, w/lamp |
| | | | **MISCELLANEOUS** |
| CNP801 | ⚠1-534-777-00 | (D) | Cord, power (UK model) |
| CNP801 | ⚠1-534-817-XX | (D) | Cord, power (AEP model) |
| F801, 802 | ⚠1-532-078-00 | (B) | Fuse, T1.0A (AEP model) |
| FE | 1-463-248-00 | (L) | Front-End Block |
| J901 | 1-507-589-00 | (C) | Jack, HEADPHONES |
| J902, 952<br>J903, 953<br>J904, 954 | 1-507-500-00 | (C) | Jack, 2P; PHONO; TAPE; REC OUT |
| ME901 | 1-520-338-00 | (H) | Meter, SIGNAL |
| TM901,902 | 1-536-446-00 | (B) | Terminal, strip; 4p; SPEAKER; ANTENNA |
| TM903 | 1-536-523-00 | (B) | Terminal, ground |
| VS801 | ⚠1-526-576-00 | (E) | Voltage Selector (AEP model) |
| | ⚠1-533-131-11 | (A) | Holder, Fuse (AEP model) |

**ACCESSORIES AND PACKING MATERIALS**

| *Part No.* | | *Description* |
|---|---|---|
| X-4490-002-1 | (A) | Cloth Ass'y, polishing |
| 1-501-184-00 | (C) | Antenna, ribbon; FM |
| 1-501-193-00 | (B) | Antenna Wire, MW/LW |
| 3-701-622-00 | (A) | Bag, plastic (UK model) |
| 3-701-630-00 | (A) | Bag, plastic |
| 3-770-577-11 | (E) | Manual, instruction |
| 4-857-503-00 | (D) | Carton |
| 4-857-573-00 | (B) | Cushion, lower (left) |
| 4-857-574-00 | (B) | Cushion, lower (right) |
| 4-857-575-00 | (B) | Cushion, upper |
| 4-857-599-11 | (B) | Leaflet for AM Antenna |
| 4-891-037-00 | (B) | Bag, plastic |

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.



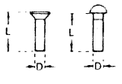
## 1/4 WATT CARBON RESISTORS Ⓐ

Note: Circled letter Ⓐ is applicable to European models only.

| Ω | *Part No.* | Ω | *Part No.* | Ω | *Part No.* | Ω | *Part No.* | Ω | *Part No.* | Ω | *Part No.* | Ω | *Part No.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.0 | 1-244-601-11 | 10 | 1-244-625-11 | 100 | 1-244-649-11 | 1.0k | 1-244-673-11 | 10k | 1-244-697-11 | 100k | 1-244-721-11 | 1.0M | 1-244-745-11 |
| 1.1 | 1-244-602-11 | 11 | 1-244-626-11 | 110 | 1-244-650-11 | 1.1k | 1-244-674-11 | 11k | 1-244-698-11 | 110k | 1-244-722-11 | 1.1M | 1-244-746-11 |
| 1.2 | 1-244-603-11 | 12 | 1-244-627-11 | 120 | 1-244-651-11 | 1.2k | 1-244-675-11 | 12k | 1-244-699-11 | 120k | 1-244-723-11 | 1.2M | 1-244-747-11 |
| 1.3 | 1-244-604-11 | 13 | 1-244-628-11 | 130 | 1-244-652-11 | 1.3k | 1-244-676-11 | 13k | 1-244-700-11 | 130k | 1-244-724-11 | 1.3M | 1-244-748-11 |
| 1.5 | 1-244-605-11 | 15 | 1-244-629-11 | 150 | 1-244-653-11 | 1.5k | 1-244-677-11 | 15k | 1-244-701-11 | 150k | 1-244-725-11 | 1.5M | 1-244-749-11 |
| 1.6 | 1-244-606-11 | 16 | 1-244-630-11 | 160 | 1-244-654-11 | 1.6k | 1-244-678-11 | 16k | 1-244-702-11 | 160k | 1-244-726-11 | 1.6M | 1-244-750-11 |
| 1.8 | 1-244-607-11 | 18 | 1-244-631-11 | 180 | 1-244-655-11 | 1.8k | 1-244-679-11 | 18k | 1-244-703-11 | 180k | 1-244-737-11 | 1.8M | 1-244-751-11 |
| 2.0 | 1-244-608-11 | 20 | 1-244-632-11 | 200 | 1-244-656-11 | 2.0k | 1-244-680-11 | 20k | 1-244-704-11 | 200k | 1-244-728-11 | 2.0M | 1-244-752-11 |
| 2.2 | 1-244-609-11 | 22 | 1-244-633-11 | 220 | 1-244-657-11 | 2.2k | 1-244-681-11 | 22k | 1-244-705-11 | 220k | 1-244-729-11 | 2.2M | 1-244-753-11 |
| 2.4 | 1-244-610-11 | 24 | 1-244-634-11 | 240 | 1-244-658-11 | 2.4k | 1-244-682-11 | 24k | 1-244-706-11 | 240k | 1-244-730-11 | 2.4M | 1-244-754-11 |
| 2.7 | 1-244-611-11 | 27 | 1-244-635-11 | 270 | 1-244-659-11 | 2.7k | 1-244-683-11 | 27k | 1-244-707-11 | 270k | 1-244-731-11 | 2.7M | 1-244-755-11 |
| 3.0 | 1-244-612-11 | 30 | 1-244-636-11 | 300 | 1-244-660-11 | 3.0k | 1-244-684-11 | 30k | 1-244-708-11 | 300k | 1-244-732-11 | 3.0M | 1-244-756-11 |
| 3.3 | 1-244-613-11 | 33 | 1-244-637-11 | 330 | 1-244-661-11 | 3.3k | 1-244-685-11 | 33k | 1-244-709-11 | 330k | 1-244-733-11 | 3.3M | 1-244-757-11 |
| 3.6 | 1-244-614-11 | 36 | 1-244-638-11 | 360 | 1-244-662-11 | 3.6k | 1-244-686-11 | 36k | 1-244-710-11 | 360k | 1-244-734-11 | 3.6M | 1-244-758-11 |
| 3.9 | 1-244-615-11 | 39 | 1-244-639-11 | 390 | 1-244-663-11 | 3.9k | 1-244-687-11 | 39k | 1-244-711-11 | 390k | 1-244-735-11 | 3.9M | 1-244-759-11 |
| 4.3 | 1-244-616-11 | 43 | 1-244-640-11 | 430 | 1-244-664-11 | 4.3k | 1-244-688-11 | 43k | 1-244-712-11 | 430k | 1-244-736-11 | 4.3M | 1-244-760-11 |
| 4.7 | 1-244-617-11 | 47 | 1-244-641-11 | 470 | 1-244-665-11 | 4.7k | 1-244-689-11 | 47k | 1-244-713-11 | 470k | 1-244-737-11 | 4.7M | 1-244-761-11 |
| 5.1 | 1-244-618-11 | 51 | 1-244-642-11 | 510 | 1-244-666-11 | 5.1k | 1-244-690-11 | 51k | 1-244-714-11 | 510k | 1-244-738-11 | 5.1M | 1-244-762-11 |
| 5.6 | 1-244-619-11 | 56 | 1-244-643-11 | 560 | 1-244-667-11 | 5.6k | 1-244-691-11 | 56k | 1-244-715-11 | 560k | 1-244-739-11 | | |
| 6.2 | 1-244-620-11 | 62 | 1-244-644 11 | 620 | 1-244-668-11 | 6.2k | 1-244-692-11 | 62k | 1-244-716-11 | 620k | 1-244-740-11 | | |
| 6.8 | 1-244-621-11 | 68 | 1-244-645-11 | 680 | 1-244-669-11 | 6.8k | 1-244-693-11 | 68k | 1-244-717-11 | 680k | 1-244-741-11 | | |
| 7.5 | 1-244-622-11 | 75 | 1-244-646-11 | 750 | 1-244-670-11 | 7.5k | 1-244-694-11 | 75k | 1-244-718-11 | 750k | 1-244-742-11 | | |
| 8.2 | 1-244-623-11 | 82 | 1-244-647-11 | 820 | 1-244-671-11 | 8.2k | 1-244-695-11 | 82k | 1-244-719-11 | 820k | 1-244-743-11 | | |
| 9.1 | 1-244-624-11 | 91 | 1-244-648-11 | 910 | 1-244-672-11 | 9.1k | 1-244-696-11 | 91k | 1-244-720-11 | 910k | 1-244-744-11 | | |

## HARDWARE NOMENCLATURE

Screw: P 3 x 10
- *L: Length in mm*
- *D: Diameter in mm*
- *Type of head*
- *Indicated slotted-head only.*
- *Unless otherwise indicated, it means cross-recessed head (Phillips type).*



Nut, Washer, Retaining ring:
N 3
- *Diameter of usable screw or shaft*
- *Reference designation*

| Reference Designation | Shape | Description | Remarks |
|---|---|---|---|
| | | **SCREWS** | |
| P | | pan-head screw | binding-head (B) screw for replacement |
| PWH | | pan-head screw with washer face | binding-head (B) screw and flat washer for replacement |
| PS<br>PSP | | pan-head screw with spring washer | binding-head (B) screw and spring washer for replacement |
| PSW<br>PSPW | | pan-head screw with spring and flat washers | binding-head (B) screw and spring and flat washers for replacement |
| R | | round-head screw | binding-head (B) screw for replacement |
| K | | flat-countersunk-head screw | |
| RK | | oval-countersunk-head screw | |
| B | | binding-head screw | |
| T | | truss-head screw | binding-head (B) screw for replacement |
| F | | flat-fillister-head screw | |
| RF | | fillister-head screw | |
| BV | | braizer-head screw | |

| Reference Designation | Shape | Description | Remarks |
|---|---|---|---|
| | | **SELF-TAPPING SCREWS** | |
| TA | | self-tapping screw | ex: TA, P 3 x 10 |
| PTP | | pan-head self-tapping screw | binding-head self-tapping (TA, B) screw for replacement |
| PTPWH | | pan-head self-tapping screw with washer face | binding-head self tapping (TA, B) screw and flat washer for replacement |
| PTTWH | | pan-head thread-rolling screw with washer face | binding-head (B) screw and flat washer for replacement |
| | | **SET SCREWS** | |
| SC | | set screw | |
| SC | | hexagon-socket set screw | ex: SC 2.6 x 4, hexagon socket |
| | | **NUT** | |
| N | | nut | |
| | | **WASHERS** | |
| W | | flat washer | |
| SW | | spring washer | |
| LW | | internal-tooth lock washer | ex: LW3, internal |
| LW | | external-tooth lock washer | ex: LW3, external |
| | | **RETAINING RINGS** | |
| E | | retaining ring | |
| G | | grip-type retaining ring | |

9-958-552-01

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# FM-AM PROGRAM RECEIVER

# STR-212L

## AEP Model
## UK Model

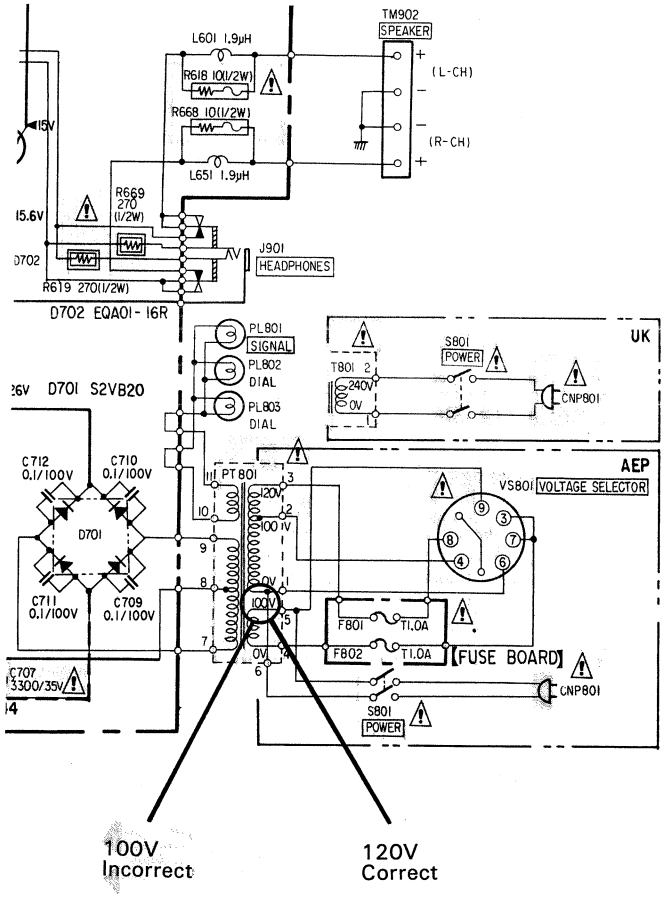
# CORRECTION

File this Correction with the Service Manual.

No. 1
Sept., 1978

**Page 20**

### 4-2. SCHEMATIC DIAGRAM

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